

## **INFORMATION LITERACY, HIGHER EDUCATION AND LIFELONG LEARNING: DEFINITION AND DESCRIPTION**

**Rafidah Abdul Aziz, Mohamad Noorman Masrek and Mohd Sharif Mohd Saad**

Faculty of Information Management,  
Universiti Teknologi MARA,  
Kampus Puncak Perdana, No. 1, Jalan Pulau Angsa,  
AU10/A, Section U10, 40150 Shah Alam  
mohd.sharif@gmail.com

### **ABSTRACT**

*Lifelong learning is the development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills, and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances, and environments. Equally important is information literacy, which is referred to as the ability to locate, evaluate, manage, use and communicate information effectively for various purposes. This paper discusses the concept of lifelong learning, information literacy and higher education. Today's higher education requires students to be learners who create their own knowledge by interacting with information from a variety of sources. This form of learning requires students to become effective users of information regardless of its format. They must learn skills for searching, retrieval, evaluation and use of the growing body of information and knowledge. Higher education should be self-directed to inculcate independent learners who would be prepared to be lifelong learners.*

**Keywords:** Lifelong learning; Information literacy; Independent learning; Higher education

### **INTRODUCTION**

The rapid advancement and sophistication of information and communication technology (ICT) for the last two decades has had a profound effect on most industries and occupations. ICT, either acting alone or with the combination of other forces such as globalization, has produced outcomes and processes which make the learning of new skills and competencies of paramount importance. Today, it is barely insufficient to have the same working skills and knowledge one had five years ago. World Bank (2002) reported that the global knowledge economy is transforming the demands of the labour market in economies throughout the world and places new demands on citizens, who need more skills and knowledge to be able

to function in their day-to-day lives. Hence, employers of today are expecting that their employees to continuously update and upgrade their skills and knowledge as to accommodate the ever-changing work nature. To cope with this expectation, public organizations as well as private companies have transformed their workplace into a so-called learning organization. Educational institutions are also increasing the number of training courses meant as a lifelong learning platform for current and prospective employees to enhance their work skills and knowledge.

Given the importance of lifelong learning for the survival and competitiveness of both employees and employers, equally important is information literacy. According to Candy, Crebert and O'Leary (1994), information literacy is an essential tool or critical ingredient for lifelong learning.

#### **LIFELONG LEARNING**

Even though the concept of lifelong learning is generally well understood by many, there are however numerous definitions and interpretations. Among the definitions are :

*"...development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances and environments" (Longworth and Davis, 1996)*

*"...Lifelong Learning encompasses learning throughout the life cycle from early childhood to retirement): formal learning (schools, training institutions, universities); non-formal learning (on-the-job and household training); and informal learning (skills learned from family members or people in the community). It allows people to access learning opportunities as they need them rather than because they have reached a certain age" (World Bank, 2002)*

*"...Lifelong learning can be defined as all purposeful learning activity undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. It contains various forms of education and training, formal, non-formal and informal, e.g. the traditional school system from primary to tertiary level, free adult education, informal search and training, individually, in a group setting or within the framework of social movements...." (Häggström, 2004).*

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Anonuevo, Ohsako and Mauch (2001) identified the characteristics of a lifelong learner as:

- i. The learner as an active and creative explorer of the world. The learner's interaction with the environment is informed by their hypotheses, perceptions, aspirations, values, attitudes, or cognitive styles and that the learner is capable of anticipating future developments, test hypotheses and create.
- ii. The learner as a reflexive agent. The learner actively engaged in problem-solving, self-questioning, critical analyses of processes and results as well as self management of learning process and comprehension
- iii. The learner as a self-actualizing agent. The learners themselves are capable of motivating themselves and exploit their own potential to fulfil their curiosity
- iv. The learner as an integrator of learning. The learners are capable of integrating all learning opportunities and taking advantage of all the different learning settings, whether in-school or out-of-school, formal or informal, and across a wide range of learning content.

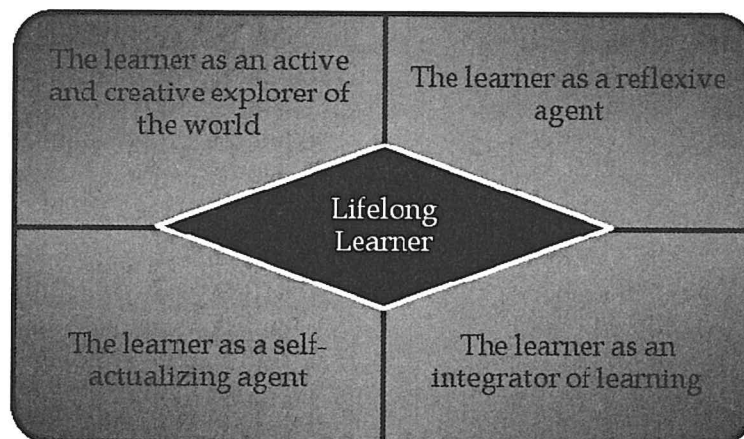


Figure 1 : Characteristics of Lifelong Learner

**AN OVERVIEW OF INFORMATION LITERACY**

The term '*information literacy*' has always been used interchangeably with '*study skills*', '*research skills*', '*bibliographic instruction*', '*information competence*', '*information handling skills*', '*information empowerment*', '*information fluency*', '*information mastery*', '*information literacy*' and '*library skills*' (Bawden, 2001). Given the variability of terms, the term information literacy is more widely adopted

and accepted by the American and Australian literature. Accordingly, the term information literacy is defined as “the ability to know when and what information is needed, to locate the information, to evaluate it and to use and apply the information that has been obtained” (Scheepers and Brassel, 2007). Alternatively, The Council of Australian University Librarians (2001) or CAUL defines information literacy as “an understanding and set of abilities enabling individuals to recognize when information is needed and have the capacity to locate, evaluate, and use effectively the needed information”. According to Doyle (1994), an information literate person should be able to access, evaluate and use information (Figure 2). An almost similar set of characteristics are enumerated by CAUL which suggests that an information literate person should be able to (i) recognise a need for information, determine the extent of information needed, (ii) access the needed information efficiently, (iii) evaluate the information and its sources, incorporate selected information into their knowledge base, (iv) utilize information effectively to accomplish a purpose, (v) understand economic, legal, social and cultural issues in the use of information, (vi) access and use information ethically and legally, (vii) classify, store, manipulate and redraft information collected or generated and (viii) recognise information literacy as a prerequisite for lifelong learning.

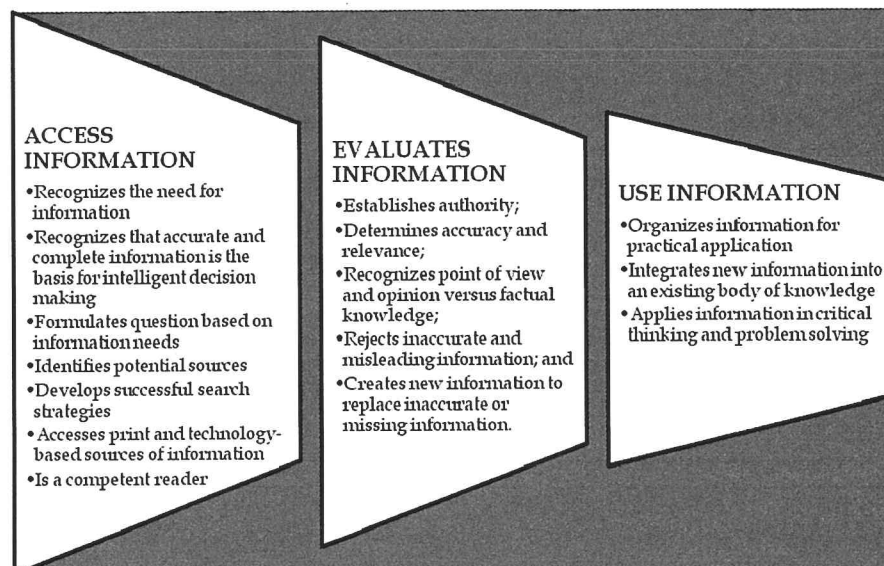


Figure 2: Characteristics of an Information Literate Person  
(adapted from Doyle, 1994)

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In January 1989, the American Library Association (ALA) set up a Presidential Committee on Information Literacy. The Committee asserted that information literacy is a necessary skill for everyday life and highlighted that an information literate student has to master the abilities to locate, organize, evaluate and communicate information and is thus empowered for effective decision making for genuine freedom of choice. They recommended that in order to produce information-literate graduates, higher education could no longer accept a teaching environment in which a significant portion of the faculty view students as mere passive receivers of information but are active users of information resources and technologies. This new model for learning would further develop critical thinking skills on the part of the students and prepare them for lifelong learning (ALA Final Report, 1989). It called for a restructuring of the teaching and learning process. The processes involved students:

- i. Knowing when they have a need for information;
- ii. Identifying information needed to address a given problem or issue;
- iii. Finding needed information;
- iv. Evaluating the information;
- v. Organizing the information; and
- vi. Using the information effectively to address the problem or issue at hand

Johnston and Webber (2000, 2004) defined information literacy as ‘the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with critical awareness of the importance of wise and ethical use of information in society’.

**HIGHER EDUCATION, INFORMATION LITERACY AND LIFE LONG LEARNING**

Today’s higher education has been bestowed and challenged by new technology such as high speed computing; instant access to electronic databases; unlimited potential of electronic publishing; easy access to and communication with international networks; integration of computers and video technologies; and the portability of laptop computers and databases. According to Wilson (1996), the amount of information encountered by a student in the final year of a teacher education programme is equivalent to the experience by their grandparents over their life rate growth. It is further projected that by year 2020, knowledge would double every 73 days (Brievik, 1998). She estimated that the sum of humankind’s knowledge has doubled at least once every two and a half years. Wurman (1989) explained the process that led to information overload and calls it “information

anxiety". He warned that information anxiety limits people to be only seekers of knowledge because no time is left for them to be reflectors of knowledge. He also emphasized that no one in higher education can escape from this information overload.

Students are now to be learners who create their own knowledge by interacting with information from a variety of sources. This form of learning, which results from the use of multiple resources, requires students to become effective users of information regardless of its format. Students must learn skills for retrieval, evaluation and use of the growing body of information and knowledge (Wilkinson, 2000). Due to the information overload and sophistication of information technology for access, students are faced with the difficulty of finding effective ways to access, evaluate and use the various formats and channels of information. Information can be retrieved from the library shelves or from home or office workstations. However, retrieving information from any source requires an understanding of how information is organized, followed by the skills to retrieve and use it effectively. An individual's working, studying or running daily life essentially involves learning situations, where one makes use of what one has been taught or trained in, but where one also has to learn to formulate answers to the issues and challenges encountered. Many scholars and educationists reiterate the importance of information literacy in facing information overload and advancement in technology (Hancock, 1993).

Newman (1985) focused on the problems of information explosion and the emerging technology to be used in assessing information. In order to overcome the problem, he reiterated that undergraduate education should be self-directed to inculcate independent learners who would be prepared to be lifelong learners. Kuhlthau (1987) discussed information literacy as the abilities that are required to manage the complex information generated by computers and the mass media and to learn throughout life, as technical and social changes demand new skills and knowledge. One of the components that have been emphasized in information literacy is lifelong learning. Rader (1990) explained that an information literate person knows how to be lifelong learners in an information society, an idea which was highly promoted by the US National Forum for Information Literacy, an umbrella body of national organizations from the United States, and other countries that promoted information literacy. This idea of information literacy as an essential tool for lifelong learning was also widely propagated by Candy, Crebert and O'Leary (1994) in their report on Australian undergraduate education.

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In 1990, the Secretary's Commission on Achieving Necessary Skills (SCANS) conducted research on the skills needed for employment and information literacy is clearly implicated in this context. The Commission concluded that due to the global nature of the economy and the impact on technology, good jobs would increasingly depend on people who can put knowledge to work. As a result of this analysis, the report suggested and recommended that among the five skills required by all Americans for job entry are the management of resources, interpersonal skills, information, and the use of information systems and technology. Doyle (1994) compared skill number three; information to the expanded version of information literacy

Reports on undergraduate education that identified the need for more active learning where students became self-directed learners who are prepared for lifelong learning are continuously being published especially in the United States. Among them are: The National Commission of Excellence in Education, 1983; The Secretary's Commission on Achieving Necessary Skills, 1991; Commission of Higher Education, Middle States Association of Colleges and Schools, 1995; and Boyer Commission on Educating Undergraduates in the Research University: Reinventing Undergraduate Education, 1998. These reports also recommended that these skills must be mastered at the undergraduate level and learning opportunities should be integrated. The American Library Association took the lead by appointing a Presidential Committee on Information Literacy in 1987. The committee released the definition of information literacy in 1989. This step invited other studies and explanation of the term and many have linked the term with lifelong learning skills.

The concern for information literacy was also linked to the support of lifelong learning and participative citizenship (Bundy, 1998, 2000; Hepworth, 2000). Prior to initiatives by the libraries, the European Organization for Economic Co-operation and Development (OECD) and European Union (EU) has long emphasized information literacy skills and lifelong learning in their reports. Although information literacy was never mentioned specifically in the OECD (1996), report on the knowledge-based economy discussed the increase in the demand for higher skilled workers. The characteristics of an information literate person were described as being able to find, evaluate and use information as:

*"The knowledge-based economy is characterized by the need for continuous learning of both codified information and the competencies to use this information...Competencies for selecting relevant and discarding irrelevant information, recognizing patterns in information, interpreting and decoding*



*information as well as learning new and forgetting old skills are in increasing demand” (OECD, 1996).*

The OECD reports (2001a, 2001b, 2001c) also expressed concern about the ability to produce and use information. The European Commission’s (2000) *A Memorandum on Lifelong Learning* noted that with Europe moving towards a knowledge-based society and economy, it is more important than ever that access to up to date information and skills to use these resources intelligently are the key to strengthening Europe’s competitiveness and improving the employability and adaptability of her workforce.

Similarly in Australia, higher education also faces challenges of reinventing themselves to remain relevant. Various reports on higher education calling for reforms have specifically called for abilities relating to information literacy among the undergraduates. The Meyer Report (1992) mentioned key competencies such as collecting, analysing and organizing ideas, information and communicating the information. The Candy, Crebert and O’Leary Report (1994) highlighted research findings that suggested that the graduates need to be information literate and the need for lifelong learning. The West Report (1998) believed that ideally, every graduate with a first degree must acquire the attributes of “research, discovery, information retrieval skills and a general capacity to use information”. There is a growing concern about the outcome from higher education when the growth of knowledge (information explosion) is such that the curriculum will always be behind, and when students are or should be developing the aptitudes for life long learning (Bundy, 1998). A follow-up to these reports was a call to shape Australian higher education into a learning culture to produce graduates with a capacity and desire for lifelong learning, in short, a call for information literate graduates. CAUL (2001) developed an information literacy standard. Adapted from the American standard, the Australian standard used the generic term “people” rather than specifically referring to the students, emphasizing the belief that information literacy is not only relevant to students but a prerequisite for lifelong learning.

## **CONCLUSION**

The students’ ability to navigate, retrieve and use information effectively becomes central to educational, professional and civic success (Owusu-Ansah, 2004). University graduates should be confident in making judgments, in an ever-changing information needs situation. Within the information society, students must be multi-skilled in problem solving and in using ICT tools, as well as able to be independent lifelong learners. These factors form the basis of an information literate person.



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Costa and Kallick (2000) recommended that information literacy must be treated “as a way of life”. They believed that if a student becomes habitually information literate, he would not differentiate between the approach taken in a classroom and those taken in the workplace or in civic life. Based on the definitions and descriptions of information literacy, an information literate person is an individual who recognizes when information is needed and is able to identify, locate, evaluate, organize, synthesise, effectively use and communicate the information ethically to address and solve problems, be it personal, social, job or studies-related and later on in life.

## **REFERENCES**

- American Library Association. 1989. *Presidential Committee on Information Literacy: Final Report*. Washington D. C.: ALA. Available at: <http://ala.org/ala/acrl/acrlpubs/whitepapers/presidential.html>
- Añonuevo, C.M.; Ohsako, T. and Mauch, W. 2001. *Revisiting Lifelong Learning for the 21st Century*. Hamburg: UNESCO Institute for Education
- Association of College and Research Libraries. 2000. *Information Literacy Competency Standards for Higher Education*. Chicago: American Library Association. Available at: <http://www.ala.org/ala/acrl/acrlstandards/information literacycompetency.htm>
- Bawden, David. 2001. Information and digital literacies: a review of concepts. *Journal of Documentation*. Vol. 57, no. 2: 218-259
- Breivik, P. S. 1998. *Student Learning In The Information Age*. Phoenix, Arizona: American Council on Education and ORYX Press.
- Bundy, A. 1998. Information Literacy: The key competency for the 21<sup>st</sup> Century. *Paper presented at the Annual Conference of the International Association of Technology University Libraries*, Pretoria, South Africa, 1-7 June, 1998.
- Bundy, A. 2000. Information literacy: the foundation of lifelong learning. Paper presented at the *Lifelong Learning Annual Conference of the South Australian Association of School Parents Clubs (SAASPC)*, 15-16 August, 2000.

- Candy, P.C.; Crebert, G. and O'Leary, J. 1994. *Developing Lifelong Learners Through Undergraduate Education*. Canberra: Australian Government Publishing Service. Available at:  
[http://www.detya.gov.au/nbeet/publications/pdf/94\\_21.pdf](http://www.detya.gov.au/nbeet/publications/pdf/94_21.pdf)
- Costa, A.I. and Kallick, B. 2000. Preface to the series. In: A.I. Costa and B. Kallicks (eds.) *Activating and Engaging Habits of Mind*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Council of Australian University Librarians. 2001. *Information Literacy Standards*. Canberra: Council of Australian University Librarians. Available at: <http://www.Caul.edu.au/caul-doc/InfoLitStandards2001.doc>
- Doyle, C. S. 1994. *Information Literacy in an Information society : A concept for the Information age*. Syracuse, NY: ERIC.
- Häggström, B. M. 2004. *The Role of Libraries in Lifelong Learning: Final Report of the IFLA Project Under the Section for Public Libraries*. Available at: <http://www.ifla.org/VII/s8/proj/Lifelong-LearningReport.pdf>
- Hancock, V. E. 1993, Information Literacy for Lifelong Learning. *ERIC Digest* (ED358870). Syracuse, NY: ERIC.
- Hepworth, M. 2000, Approaches to information literacy training in higher education: challenges for librarians. *New Review of Academic Librarianship*, Vol. 6: 21-34.
- Johnston, B. and Webber S. 2000. Towards the information literate graduate: rethinking the undergraduate curriculum in business studies. In: Appleton, K.; Macpherson C, and Orr, D. (eds.), *Lifelong Learning Conference: Selected Papers from the Inaugural International Lifelong Learning Conference*, Queensland, Australia, 17 –19 July 2000.
- Johnston, B. and Webber, S. 2004. The role of LIS faculty in the information literate university: taking over the academy?. *New World Library*. Vol. 105, no. 1/2: 12-20
- Kuhlthau, C. C. 1987. *Information Skills for an Information Society: A Review of Research*. Syracuse, New York: ERIC.

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- Longworth, N. and Davis W. K. 1996. *Lifelong Learning: New Vision, new implications, new roles for people, organizations, nations and communities in the 21st century*. London: Kogan Page
- Newman, F. 1985. *Higher Education and the American Resurgence: A Carnegie Foundation Special Report*. Princeton, N.J.: Carnegie Foundation for the Advancement of Teaching. ED 265 759.
- OEAD. 1996. *The knowledge Based Economy*. Paris: OEAD.
- OEAD. 2001a. *Cities and Regions in the New Learning Economy*. Paris: OEAD.
- OEAD. 2001b. *Educational Policy Analysis*. Paris: OEAD.
- OEAD. 2001c. *Learning to Change*. Paris: OEAD.
- Owusu-Ansah, Edward K. 2003. Information literacy and the academic library: A critical at the concept and the controversies surrounding it. *The Journal of Academic Librarianship*, Vol. 29 (July). 219-230
- Rader, H. 1990. Bibliographic instruction or information literacy. *College and Research Libraries News*. Vol. 51, no. 1:18-20
- Spitzer, K. L.; Eisenberg, B. M. and Lowe, A. C. 1998, *Information Literacy: Essential Skills For The Information Age*. Syracuse, New York: ERIC.
- Wilson, T. D. 1996, Information needs and uses: fifty years of progress: *Journal of documentation review*. London : *Aslib*. 15-51.
- Wilkinson, J. 2000, From transmission to research: librarians at the heart of the campus. *College and Undergraduate Libraries*, Vol.. 6, no. 2: 25-40.
- World Bank. 2002. *Lifelong Learning in the Global Knowledge Economy: Challenge for Developing Countries*. World Bank, Washington D.C.
- Wurman, R. S. 1989. *Information Anxiety*. New York: Doubleday.

